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Model BETA 52[®] User's Guide



MODEL BETA 52[®] SUPERCARDIOID DYNAMIC INSTRUMENT MICROPHONE GENERAL

The Shure BETA 52 is a high output dynamic microphone with a tailored frequency response designed specifically for kick drums and other bass instruments. It provides superb attack and "punch," and delivers studio quality sound even at extremely high sound pressure levels.

The BETA 52 features a modified supercardioid pattern throughout its frequency range to insure high gain before feedback and excellent rejection of unwanted sound. A built-in dynamic locking stand adapter with an integral XLR connector simplifies installation, particularly if the microphone is to be placed inside a kick drum. The stand adapter keeps the microphone position fixed and resists slipping, even when subjected to sharp blows and strong vibrations. A hardened steel mesh grille protects the BETA 52 from the abuse and wear associated with touring.

FEATURES

- Frequency response shaped specifically for kick drums and bass instruments
- Built-in dynamic locking stand adapter with integral XLR connector simplifies setup, especially inside a kick drum
- Studio quality performance, even at extremely high sound pressure levels
- Supercardioid pattern for high gain before feedback and superior rejection of unwanted noise
- Hardened steel mesh grille that resists wear and abuse
- Advanced pneumatic shock mount system that minimizes transmission of mechanical noise and vibration
- Neodymium magnet for high signal-to-noise ratio output
- Low sensitivity to varying load impedance
- Legendary Shure quality and reliability

APPLICATIONS AND PLACEMENT

The most common BETA 52 applications and placement techniques are listed in the following table. Keep in mind that microphone technique is largely a matter of personal taste—there is no one "correct" microphone position.

APPLICATION	SUGGESTED MICROPHONE PLACEMENT*	TONE QUALITY
Kick Drum	2" to 3" (5 to 7.5 cm) away from beater head, slightly off-center from beater.	Sharp attack; maximum bass sound, highest sound pressure level.
	8" to 12" (20 to 30 cm) from beater head, on-axis with beater.	Medium attack; balanced sound.
	8" to 12" (20 to 30 cm) from beater head, 6 to 8 inches from edge of head.	Medium attack; thin, reduced bass sound.
	2" to 3" (5 to 7.5 cm) away from outside head, on-axis with beater (double head kickdrum only).	Softer attack; balanced, resonant sound. NOTE: To "tighten" the beat, place a pillow or blanket on bottom of drum against beater head.
Electric Bass Amplifier	1" (2.5 cm) from speaker, on-axis with center of speaker cone.	Sharp attack; emphasized bass.
	1" (2.5 cm) from speaker, at edge of speaker cone.	Sharp attack; higher frequency sound.
	4" to 6" (10 to 15 cm) from speaker, on-axis with center of speaker cone.	Sharp attack; full, balanced sound.
	2' to 3' (60 to 90 cm) from speaker, on-axis with center of speaker cone.	Soft attack; mellow, higher frequency sound.

MOUNTING THE BETA 52 ON A MICROPHONE STAND

The built-in stand adapter features a **dynamic locking system** that permits adjustments to the microphone's position, but resists slipping when struck or bumped. To mount the BETA 52 on a stand and adjust its position, proceed as follows:

1. Screw the integral stand adapter onto the end of a microphone stand (see Figure 3). Adjust the stand height and position as necessary.
2. Pivot the BETA 52 until it is in the desired position relative to the drum head or loudspeaker.
3. Lock the BETA 52 in place by rotating the adjustment knob on the stand adapter clockwise until it is tight. Do NOT over-tighten the knob with tools.
4. If necessary, make minor adjustments to the microphone position without loosening the adjustment knob.
5. Connect an audio cable to the integral XLR connector.



SPECIFICATIONS

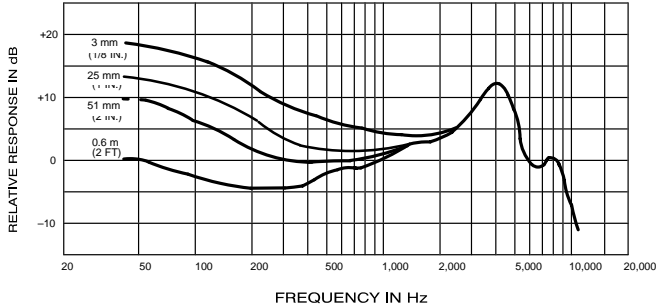
Type

Dynamic (moving coil)

Frequency Response

20 to 10,000 Hz (see Figure 1)

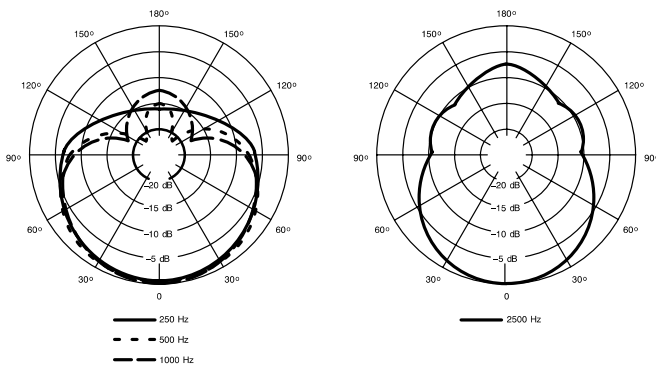
NOTE: The curve below shows on-axis response at a distance of 2 feet from a uniform sound source. Your response may vary, depending on microphone position.



TYPICAL FREQUENCY RESPONSE
FIGURE 1

Polar Pattern

Supercardioid, rotationally symmetrical about microphone axis (see Figure 2)



TYPICAL POLAR PATTERNS
FIGURE 2

Output Level (at 1,000 Hz)

Open Circuit Voltage: -64 dBV/Pa* (0.06 mV)
*1 Pa = 94 dB SPL

Impedance

Rated impedance is 150 Ω (45 Ω actual) for connection to microphone inputs rated low Z

Phasing

Positive pressure on diaphragm produces positive voltage on pin 2 with respect to pin 3

Maximum SPL

174 dB at 1000 Hz (calculated)

Connector

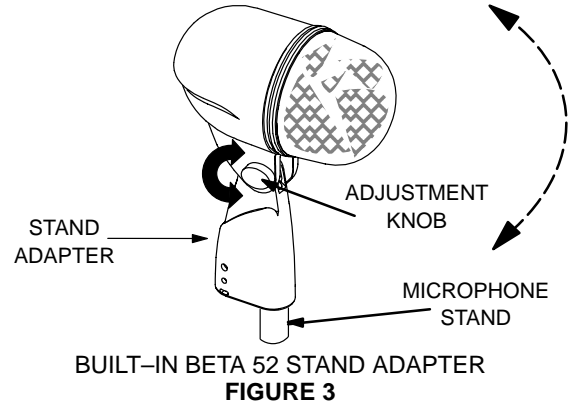
Three-pin professional audio connector (male XLR type)

Case

Silver blue enamel-painted die cast metal with hardened, matte-finished steel grille

Adjustable, Locking Stand Adapter

Integral, dynamic locking, adjustable through 180°, with standard 5/8"-27 thread (see Figure 3)



Net Weight

605 grams (21.6 oz)

Certification

Conforms to European Union directives, eligible to bear CE marking; meets European Union EMC Immunity Requirements (EN 50 082-1, 1992).

FURNISHED ACCESSORIES

- Storage Bag 26A25
- 5/8" to 3/8" (Euro) Thread Adapter 95A2050

OPTIONAL ACCESSORIES

- 7.6 m (25 ft) Cable C25E, C25F

REPLACEMENT PARTS

- Cartridge R175
- Screen and Grille Assembly RK321
- Plug (connector) Assembly 90F1984

NOTE: Use care when removing the cartridge holder from the base to prevent breakage of the lead wires.